

CANADIAN ENGINEERING ACCREDITATION BOARD
Abridged minutes of the 164th meeting

CONFIDENTIAL

3059 DATE AND PLACE

The 164th meeting of the Accreditation Board took place at the Carleton Suites hotel, in Ottawa, Ontario on June 1 & 2, 2019.

3060 ATTENDANCE

The following were in attendance:

Chair: L. (Luigi) Benedicenti, FEC, P.Eng.
Vice-Chair: R. (Robert) Dony, FEC, P.Eng.
Past-Chair: W. (Wayne) MacQuarrie, FEC, P.Eng.
Members: P. (Paula) Klink, P.Eng.
D. (Dan) Candido, FEC, P.Eng.
S. (Suzelle) Barrington, FIC, ing.
R. (Ray) Gosine, FEC, P.Eng.
P. (Pemberton) Cyrus, FEC, P.Eng.
J. (Jeff) Pieper, FEC, P.Eng.
P. (Pierre) Lafleur, FIC ing.
S. (Suzanne) Kresta, FEC, P.Eng.
A.M. (Anne-Marie) Laroche, ing.
T. (Tara) Zrymiak, FEC, P.Eng.
R. (Ramesh) Subramanian, FEC, P.Eng.
J. (Julius) Pataky, P.Eng.
E. (Emily) Cheung, FEC, P.Eng.

Secretariat: L. (Lynn) Villeneuve, LL.B.
J. (Johanne) Lamarche
M. (Mya) Warken

Representatives of the Engineers Canada Board:

J. (Jeff) Card, FEC, P.Eng.
G. (Gary) Faulkner, FEC, P.Eng.

Observers: (the following were in attendance for all, or part, of the meeting)

S. (Stephanie) Price, P.Eng. (Engineers Canada Executive vice-president)
W. (Wendy) Vasquez (Canadian Federation of Engineering Students)
M. (Mélanie) Ouellette (Engineers Canada)
R. (Ron) LeBlanc, FEC, P.Eng. (CEQB Chair)
G. (Gillian) Pichler, FEC, P.Eng., ing. (Engineers and Geoscientists BC)
S. (Sidhu) Tarlochan, P.Eng. (Dean, OTU)

M. (Michael) Isaacson, FEC, P.Eng. (Chair, University of Waterloo visit)
G. (Gérard) Lachiver, FIC, ing. (Chair, UPEI visit)
D. (David) Lynch, P.Eng. (Engineers Canada President)
Marie-Josée Nollet (École de technologie supérieure)

3061 CALL TO ORDER AND APPROVAL OF THE AGENDA

The Chair called the meeting to order and all attendees introduced themselves. The confidentiality of Accreditation Board proceedings was explained to all present. A copy of the Rules of Confidentiality was included in the agenda book for information.

The following motion was carried unanimously:

MOTION:

“That the agenda be accepted as amended and that the Chair be authorized to revise the order of business as necessary to accommodate the needs of the meeting.”

3062 MEMBERSHIPS

3062.1 Accreditation Board memberships for 2019-2020

L. Benedicenti announced two new members and two members' extensions.

Reappointments to the Board included:

P. Klink, member-at-large
P. Lafleur, member-at-large

New appointments to the Board effective July 1, 2019 were:

W. ElMaraghy, member-at-large
J.A. Stewart, member-at-large

It was noted that G. Faulkner, Engineers Canada Director appointee, would be ending his term on June 27, 2019. A new appointee would be approved by Engineers Canada's Board on June 27, 2019. As per the new Accreditation Board terms of reference, the Engineers Canada Director appointees will be invited to all Accreditation Board meetings.

3063 APPROVAL OF THE MINUTES OF THE 163rd MEETING – February 2, 2019

The minutes and the action items of the 163rd Accreditation Board meeting were included in the June meeting materials.

The minutes have been amended with comments from T. Zrymiak, A.M. Laroche and P. Lafleur.

The following motion was carried unanimously:

MOTION:

“That the Minutes and actions items of the 163rd meeting be accepted as amended.”

3064 INFORMATION

3064.1 Report on the 3rd Atlantic meeting on the Engineering Graduate Attributes (AMEGA 2019)

L. Benedicenti provided an update on the AMEGA meeting which was held in Fredericton, New Brunswick on May 16, 2019.

The main focus of the meeting was the validation of results obtained from the assessment of graduate attributes

3064.2 Report on the Quebec meeting on the Engineering Graduate Attributes

P. Lafleur and S. Barrington provided an update on the Engineering Graduate Attributes meeting which was held at McGill University on May 24, 2019.

The outline they presented at the meeting included:

- Accreditation Board activities
- Accreditation Board February 2 and 3, 2019 meeting
- Criteria and procedures update
- Accreditation Improvement Program

3064.3 Report on the Western Annual Graduate Attribute & Curriculum Improvement Process (GACIP)

L. Villeneuve provide an update on the Western GACIP meeting which was held at the British Columbia Institute of Technology on May 28, 2019.

HEI's from the western provinces side met to discuss graduate attributes and curriculum improvement. Meeting organizers provided a report to the Accreditation Board secretariat where it was mentioned that it was a good session including great topics and good conversation.

There were no Accreditation Board members that attended the meeting, but meeting organisers provided the following feedback and actionable items:

- Participants at the session continue to find some of the graduate attributes are a challenge to measure in the classroom and as such developing measures such as rubrics complicated.
- Graduate attributes 8, 10 and 12 may be more appropriately measured by employers or industry type surveys.
 - It was suggested that the Accreditation Board consider increased graduate attribute measurement for the aforementioned by industry.
 - Some attributes could still be measured in the classroom, but the measurements would not be as frequent as it occurs for the other nine graduate attributes.
- Attendees at the Western GACIP meeting also remotely attended AMEGA and recalled the positive shift, as presented by L. Benedicenti, by the Accreditation Board towards increased valuation by the Accreditation Board for survey results.

J. Pieper mentioned that as the result of the feedback received, perhaps future meeting organizers should be encouraged to have Accreditation Board representation at their meetings.

W. MacQuarrie said that he would also be interested in hearing about the outcome of the Atlantic GACIP meeting such as an overall response to the focus on process.

L. Benedicenti said that as the Accreditation Board moves towards a focus on process, rapid changes to criteria and to procedures should be avoided. The Accreditation Board must be very clear about any changes, transitions and how these transitions are coming into play on accreditation visits.

L. Benedicenti encouraged members to accept meeting invitation to improve communication.

Action item:

- Secretariat to contact all GACIP meeting organizers and ask that they send invitation to the Accreditation Board

3064.4 Update on the Canadian Engineering Education Association (CEEA) meeting

L. Benedicenti provided information on the CEEA meeting which will be held in Ottawa, Ontario from June 9 to 12, 2019. L. Villeneuve will report on the outcome of the meeting at the September 2019 Accreditation Board meeting.

3064.5 National Position Statement on AI Engineering Technology in Autonomous and Connected Vehicles

L. Villeneuve stated that engineering regulators, the Accreditation Board and the National Society of Professional Engineers were currently reviewing the national position statement on Artificial Intelligence Engineering Technology in Autonomous and Connected Vehicles. Each association were given until June 7, 2019 to provide feedback on the draft copy.

The Accreditation Board's feedback included suggesting removing the statement regarding the need for artificial intelligence engineering technology, and as part of that, its use in autonomous and connected vehicles, as it is addressed comprehensively in the curriculum and associated engineering education standards.

Members were thanked for providing comments.

3065 REPORTING

3065.1 Report on the Engineers Canada Board winter meeting

L. Benedicenti provided an update on the February 27 to March 1, 2019 Engineers Canada Board meeting.

The Engineers Canada Board received a status update on the following:

- the ongoing work of accreditation led by the Accreditation Board with support from Engineers Canada staff,
- the Accreditation Improvement program led by Engineers Canada staff, and
- the work of the AU Task Force, which is a collaboration of Accreditation Board members and NCDEAS with regulator representation

3065.2 Report on the Engineers Canada Board spring meeting and Annual Meeting of Members (AMM) meeting

L. Benedicenti provided an update on the May 22 to 25, 2019 Engineers Canada Board meeting and the AMM.

The May 24th meeting's agenda included:

Approvals for the following:

- appointments to the Accreditation Board:
 - Pierre Lafleur as a member-at-large
 - Paula Klink as member-at-large
 - Waguhi H. ElMaraghy as member-at-large
 - John Allen Stewart as member-at-large
- appointments to the Qualifications Board:
 - Ian Sloman, from the Saskatchewan/Manitoba region
 - representative from the Quebec region to be determined
- the use of unallocated affinity revenue and transfer of funds from restricted reserves to unrestricted reserves
- various Engineers Canada Board Policies
- change to accreditation criterion 3.1.5

The Annual Meeting of Members' agenda included the following:

- 2018 Audited Financial Statements
- updates to By-Laws
- Engineers Canada Board appointments and departures

J. Card provided a short description on the following topics presented at the May Engineers Canada Board meeting:

- Accreditation Board and Qualifications Board appointments
- Funding Task Force
- Governance and Strategic Planning Committee update
- Engineers Canada appointments including the President Elect
- Interim performance score card results

3065.3 Update on the Qualifications Board's activities

R. LeBlanc provided an update on Qualifications Board activities. A presentation was provided to meeting participants.

Some updates on their activities included the following:

- the Qualifications Board 's mandate
- status updates as follows:
 - finalizing the Regulator Guideline on the Use of Syllabi
 - approving a new Syllabus Creation Protocol and revising the Syllabus Review Protocol
 - reviewing the Basic Studies and the Biomedical Engineering Syllabi
 - developing a new Aerospace and Aeronautical Engineering Syllabus
 - consulting officials' groups on 2020 priorities

- Next steps included the following:
 - The Qualifications Board will approve its 2020 priorities this summer.
 - Priorities will be submitted to Engineers Canada Board in October 2019 for information, and for final approval in December.
 - Accreditation Board members were invited to consider the assessment of applicants whose education is not Accreditation Board accredited in their deliberation on the definition of engineering design.

M. Ouellette noted that the protocol included highlights of the steps followed to develop the syllabus, taking a look at the newly accredited programs across the country, and hiring experts to help evaluate the contents of the programs.

3065.4 Accreditation Board's observation of the April 2019 Qualifications Board Meeting

J. Pieper provided a report on his observation of the Qualifications Board meeting held on April 6 & 7, 2019.

He provided feedback on the following meeting agenda topics:

- Draft White Paper on Environmental Engineering
- Practice Committee
- New Syllabus Creation Protocol and Revised Syllabus Review Protocol
- EIT Committee
- Revised guideline on assessment of work experience using competency-based assessment where the following were noted:
 - The guideline is missing ethics, an overview of competency-based assessment, and on-going proof of competency.
 - Does competency-based assessment remove barriers? Multiple pathways for assessing experience should exist. Is competency-based assessment motivated by protection of the public or audit culture?
 - While competencies are mapped to graduate attributes, graduate attributes assess programs, not individuals.
 - Competency-based assessment should provide no additional burden to applicants.

J. Pieper reported that during his attendance at the Qualifications Board meeting, he provided information on the following Accreditation Board topics:

- Single renewal for members
- Use of "marginal" as a visiting team recommendation
- Role of general visitors
- AU Task Force
- ED Task Force
- Accountability in Accreditation Committee

T. Zrymiak provided the following comments on competency-based assessments:

- Competency based assessment is going very well at APEGS.
- Ethics is covered in the guidelines explicitly under the Professional Accountability Competency.
- Ongoing proof of competency is a separate program that virtually all the regulators have now.

M. Ouellette stated that the Qualifications Board has been using the Accreditation Board's curriculum content categories to assess engineering design as they have no way of evaluating engineering design. Syllabi are categorized by discipline. The Qualifications Board will be evaluating applicants who are graduates from disciplines not covered by syllabi.

G. Pichler noted that she was not sure that design can be tested with new graduates.

Action item:

- Engineering Design Committee to collaborate with the Qualifications Board regarding the definition of design.

3065.5 Update on the National Council of Deans of Engineering and Applied Science (NCDEAS) meeting

R. Dony provided an update on the May 2 to 4, 2019 National Council of Deans of Engineering and Applied Science (NCDEAS) meeting hosted by Guelph University. Updates were provided on the following:

- Accreditation Board activities
- Accreditation Board February 2 and 3, 2019 meeting
- AU Task Force
- Accreditation Improvement Program

S. Kresta, on behalf of NCDEAS chair J. Nicell, provided that one of the major accomplishments that came out of the meeting was the Calgary Declaration on the future of Engineering Education adopted May 3, 2019. The deans had extensive conversation on the topic. They have looked at what is the future direction of engineering education at a fairly high level and considered how NCDEAS, in collaboration with their partners, can drive substantive change in engineering education for the benefit of the engineering profession and broader society.

D. Lynch mentioned that Dean Nicell presented the Calgary Declaration topic to the Engineers Canada Board and that there was a unanimous vote of support.

3065.6 Presentation from the Canadian Federation of Engineering Students (CFES)

W. Vasquez provided an update on CFES activities. Her presentation focused on the following subjects:

General updates:

- Conference on sustainability in Engineering
 - 83 participants

- successful inaugural event
- technical tours of UNBC campus
- LEED green belt certification course
- tremendous faculty & dean support
- Canadian engineering competition
 - 200 + participants
 - successful integration with local, regional rounds
 - 8 competition streams run
 - 28 members qualified
 - strong industry support, and return sponsors
- Congress
 - Hosted by McGill University
 - 190 participants
 - inclusivity training
 - leadership training
 - keynote by Jim Nicell
 - mandate for a regular, CFES national student survey
 - 1 new official stance on equity, diversity, inclusion
- Annual overview

Accreditation:

- Accreditation Units
 - Current accreditation system is not representative of the knowledge acquired by students throughout their curriculum.
- Food for thought:
 - A balanced workload throughout an engineering curriculum could be beneficial for students' well-being and mental health.
- Research and recommendations:
 - A research and creative effort by the CFES Advocacy Working Group to develop accreditation system recommendations
 - Research other existing systems such as the European Credit Transfer System (ECTS)
 - What should be included as contact hours?
 - What should be the key indicators for evaluating the accreditation system?

Accreditation visits:

- Students are important stakeholders: they should be given the means to accomplish this role by being more involved in the accreditation process.
- CFES recommendations:
 - official meeting with the student associations
 - increased student leaders' awareness of accreditation issues
 - random sample of students chosen by the Accreditation Board for on-site meetings with students
 - open meetings with all students
 - communication material for the Accreditation Board

National Student survey

- The following topics were addressed:
 - student workload & mental health
 - teaching quality
 - co-op programs
 - language courses electives eligibility

CEAB & CFES collaboration:

- What CFES can provide:
 - network covering every engineering student society in Canada & their members
 - in-person voting meetings with elected representatives from each institution
 - conferences/competition as venues to earn student mindshare on NCDEAS priorities
 - research on student experience for improving program outcomes
 - experienced office team that can provide input and support to focused discussions

Comments:

T. Zrymiak

- CFES statement about accreditation appears to indicate that the accreditation process should protect the interests of engineering students. They are doing very good work so far, but without understanding and expressing the paramount purpose of accreditation to protect the public, the work could move down undesirable paths.

P. Cyrus

- Student workload: concern about how to measure and validate objectivity

3065.7 Accreditation Board process improvements

L. Villeneuve provided an update on the Accreditation Improvement Program (AIP).

Updates included the following:

- Understanding Engineers Canada's accreditation portfolio including:
 - Ongoing work of accreditation
 - Accreditation Improvement Program
 - AU Task Force
- Elements of the Accreditation Improvement Program:
 - Communication and consultation
 - monthly AIP email update continues to over 200 key stakeholders including all HEIs
 - Training
 - focus on Tandem training for HEI staff to enter survey information (78 individuals over 5 sessions)
 - Data management system
 - focus on the enrolment and degrees awarded survey in the first phase of deliverables
 - Continual improvement
 - established a formal process for receiving feedback and data-informed decision making
 - impact evaluation of any changes for improvement

3065.8 Update on policy changes as recommended by the Nominations Task Force

The Engineers Canada Nominations Task Force recommendations were unanimously approved on September 26, 2018. Two new policies incorporating

all of the recommendations were developed—one for the CEAB and one for the CEQB.

During the implementation stage, three challenges not addressed by the Nominations Task Force were considered by the Governance Committee:

- Change management and grandfathering for existing CEAB and CEQB members who are affected by these changes
- The term limits of the executive committees (consisting of the vice-chair, chair and past-chair)
- Obtaining the support of regulators for members of the executive committees

The Governance Committee developed recommendations to address those challenges. The Engineers Canada Board met on April 16 by teleconference. During that meeting amended policies that addressed these challenges were approved. The new policies (in tracked changes) were included in this agenda.

L. Benedicenti noted the following highlights of the new policies:

- Engineers Canada Director appointees can now vote on the Accreditation Board meeting decisions
- Changes to the Vice-chair and members-at-large appointment process
- Changes to the Terms of Reference of the Accreditation Board

Action item:

- Secretariat to prepare a Vice-chair appointment election process email for distribution to the Accreditation Board

3065.9 Update from the Accountability in Accreditation Committee

R. Gosine provided an update on the Accountability in Accreditation Committee whose members include the following:

- R. Gosine, Chair
- S. Barrington, member, industry
- G. Faulkner, Engineers Canada Board representative
- S. Kresta, member, academia
- P. Lafleur, member, P&P representative
- M. Oliver, regulator representative

The Committee met in February and had an initial discussion largely centered around verifying the Terms of Reference of the committee. The substantive piece that came out of the discussion was an action item to develop the statement of work and job description that would be used for retaining a program evaluation consultant. The Committee's next meeting will be to refine the Terms of Reference and kick off that piece of work.

Action item:

- Secretariat to upload Terms of Reference to the collaboration space (OneHub)

3066 ACCREDITATION ACTIVITIES

3066.1 Accreditation Board Fall 2019 / Winter 2020 Visits

L. Villeneuve provided a verbal report of activities to date related to the fall 2018 and winter 2019 accreditation visits. A list of visits was provided in the meeting materials. There will be 13 visits in the 2019/2020 cycle including three new programs. A total of 51 programs will be visited.

3066.2 Member Assignments for the September 2019 Accreditation Board Meeting

L. Benedicenti presented the members' assignments for the September 2019 meeting for workload planning purposes. No concerns were raised regarding the assignments.

Action item:

- Secretariat to review the list of programs presented under this item, in particular the University of Western Ontario's Mechatronic Systems Engineering program.

3066.3 Programs under development

L. Benedicenti presented the list of programs under development: 24 programs at 23 different institutions. The University of British Columbia's Environmental Engineering program should be marked as a stand-alone program.

Action item:

- Secretariat to add word "Engineering" under the Environmental program at the University of British Columbia heading and amended list of programs under development before the September Accreditation Board meeting

3066.5 Anticipated accreditation visits 2022-2025

L. Villeneuve presented the 2022-2025 anticipated accreditation visits schedule for information and workload planning purposes.

3067 ABRIDGED ACCREDITATION DECISIONS

3068 HOW TO CHAIR A VISIT: TRAINING FOR CEAB MEMBERS

Due to time constraints, this topic was deferred to the September 2019 Accreditation Board meeting.

3069 POLICY ITEMS

3069.1 Policies and Procedures Committee

R. Dony, Policies and Procedures Committee Chair, provided a review of the list of active issues and their status from the last Policies and Procedures Committee meeting.

3069.1.1 Policies and Procedures Committee meeting and the Deans Liaison Committee meeting

R. Dony provided an update on the meeting's topics of discussion at the May 1, 2019 meeting.

Action item:

- P&P to develop an implementation plan to be brought back to CEAB

3069.1.2 Update from the AU Task Force

R. Dony provided an update on the work of the AU Task Force including the development of the white paper titled "*Curriculum Content Measurement: Beyond the AU*". Accreditation Board members were asked to consider the following recommendations:

- Consult with regulators and other stakeholder groups to consider reducing the minimum program total in criterion 3.4.6 from 1,950 to 1,850 accreditation units (AU).
- Consult with HEIs, regulators and other stakeholder groups to consider replacing the AU definition for the minimum curriculum elements in criteria 3.4.2–3.4.5 with the percentages from section 6.2.
- Perform an analysis with HEIs that use student learning time in their definition of academic credit to consider establishing a learning time specification as an alternative minimum program total for criterion 3.4.6

Comments:

J. Pataky:

- trying to understand how the P&P sees the graduate attributes integrating with the AU.

P. Cyrus:

- issue with learning time approach is concern over validation

S. Kresta:

- why 1850 is supportable – conversion/course + 10 AU above

E. Cheung:

- useful to know that the committee looked at increasing lab from .5 AUs to 1 AU, and wanted to keep Canadian programs as "lab-rich"

The following motions were carried unanimously:

MOTIONS:

"THAT the white paper titled "Curriculum Content Measurement: Beyond the AU" be accepted as presented."

"THAT the recommendations of the AU Task Force be incorporated within the P&P annual workplan."

Action item:

- P&P to incorporate the recommendations of the AU Task Force in their annual workplan.

3069.1.3 General Visitor role description

P. Klink presented the final version of the General Visitor role description which incorporated feedback received from the Accreditation Board and its stakeholders.

The following motions were carried unanimously:

MOTIONS:

"THAT the General Visitor Working Party be stood down."

"THAT the General Visitor Role Description be approved as presented. The Role Description will be available for the 2019/2020 visit cycle, and fully implemented in 2020/2021."

"THAT consultation on the general visitor report and the future of the role in the accreditation process be incorporated within the P&P's annual workplan."

Comments:

G. Pichler:

- Consider expanding the role of the general visitor. Revisit the objective of a general visitor not being an academic.
- Consider adding visitor report to visiting team report

Action item:

- P&P to incorporate the consultation on the general visitor report and the future of the role in the accreditation process in their annual workplan.

3069.1.4 CEAB Complaints Policy

L. Villeneuve presented the CEAB Complaints Policy, for consideration.

Together with the CEAB Secretariat, the P&P developed a draft Complaints Policy to guide to handle and direct the receipt of complaints about a CEAB-accredited engineering program, or a program which has a current application for initial accreditation pending. The Complaints Policy is limited to only those complaints which address a program's compliance with accreditation criteria or established accreditation policies.

The following motion was carried with one abstention (R. Gosine, issue of verbal complaints):

MOTION:

"THAT the CEAB Complaints Policy be approved, as presented. The Complaints Policy will be included in the 2019 Accreditation Criteria and Procedures."

Action item:

- Secretariat to include the approved CEAB Complaints Policy in the 2019 Accreditation Criteria and Procedures.

3069.1.5 Criteria 3.4 (Curriculum Content and Quality) and Interpretive Statement on Licensure Expectations and Requirements (Appendix 3)

R. Dony presented P&P's recommendations to amend criterion 3.4 and the Interpretive Statement on Licensure Expectations and Requirements (Appendix 3)

The only criteria that explicitly reference specified AU requirements are 3.4.4.4 and 3.5.5. Any other curriculum component which has specified AU requirements only makes mention of this requirement in the interpretive statement. This inconsistency has caused some confusion amongst some visiting teams. Additionally, the NCDEAS has criticized the interpretive statements as akin to "shadow regulations" rather than additional guidance on the interpretation and application of specific criteria. Visiting teams apply the specific AU requirements as de facto criteria.

The following motions were carried unanimously:

MOTIONS:

"THAT criteria 3.4.4.1 and 3.4.4.4 be amended as below:

3.4.4.1 A minimum of 600 Accreditation Units (AU) of a combination of engineering science and engineering design curriculum content in an engineering program shall be delivered by faculty members holding, or progressing toward, professional engineering licensure as specified in the Interpretive statement on licensure expectations and requirements.

3.4.4.4 A minimum of 225 AU of engineering design curriculum content in an engineering program shall be delivered by faculty members holding professional engineering licensure as specified in the Interpretive statement on licensure expectations and requirements."

"THAT Interpretive statement on licensure expectations and requirements be amended as follows:

Faculty members who are within five years of their first-time appointment in a Canadian engineering school (and other instructors, such as adjuncts and sessionals, in the registration process) and are actively pursuing licensure can be counted for courses involving engineering science to satisfy the 600 AU of engineering science and engineering design minimum."

Action items:

- Secretariat to submit the proposed criteria change (3.4.4.1 and 3.4.4.4) to the Engineers Canada Board proposal.
- Secretariat to incorporate the Interpretive Statement changes in the 2019 Accreditation Criteria and Procedures

3069.1.6 Statistical analysis on the time-variance of accreditation units

W. MacQuarrie presented the final report titled *Statistical analysis on the time-variance of accreditation unit*.

Over the summer of 2018, an in-depth analysis of Accreditation Units (AUs) overtime was undertaken. The report, Statistical analysis on the time-variance of accreditation units has been reviewed several times by both the P&P and the CEAB. The Secretariat reviewed all feedback received from P&P and CEAB members and worked with the communications team to improve clarify of the report, corrected grammatical mistakes, and addressed formatting concerns.

The following motion was carried unanimously:

MOTION:

"THAT the report on Statistical analysis on the time-variance of accreditation unit be approved as presented and circulated to stakeholders."

3069.1.7 Definition of Engineering Design Working group

J. Pieper, S. Kresta, and E. Cheung provided an update on the work of the Definition of Engineering Design working group.

Engineering Design is a nebulous term to define and use. HEIs, Program Visitors and Accreditation Board members potentially have differing subjective interpretations of the term. AB uses the terms in both inputs (AUs) and outcomes (GAs). The goal is to have a single, accurate and comprehensive definition and interpretive statement on "Engineering Design".

There was some suggestion that Engineering Design should only be tested at the conversion to P.Eng. through experience rather than during university. This feedback will be considered during the re-definition exercise.

After consultation with several stakeholders (including HEIs, AB, regulators, and NSERC Design Chairs) the working group presented their report and recommendations to the Accreditation Board.

The following motion was carried unanimously:

MOTION:

"THAT the Definition of Engineering Design Working group consult with stakeholders (NSERC Design Chairs, CFES, regulators, and the Qualifications Board) on the recommendations in their report titled "Engineering Design Task Force Report"."

3069.1.8 Toward a greater focus on GA/CI process: documentation

R. Dony provided an update on the implementation of an updated Questionnaire, Exhibit 1, and GA/CI rubrics to reflect the AB's move to toward a greater focus on GA/CI process.

At their February 2019 meeting, the CEAB approved the documents in principle subject to further feedback from the DLC and edits provided by CEAB members. Those edits as well as some suggestions for improvement from the Graduate Attribute Process Network (GAPnet) have been incorporated within the final documents.

The P&P has recommended that these documents be implemented for the 2020/2021 visit cycle.

Comments:

E. Cheung:

- Questioned why there are no limits on response

P. Lafleur:

- "select 3 to 5 courses" is a concern because this was open ended in the past

3069.1.9 A/M/U rating clarification

R. Dony will provide an update on the new visiting team report template which replaces A/M/U ratings with an "Observation Type" of ✓, or *.

The P&P has recommended that the new observation types be implemented for the 2019/2020 visit cycle.

Comment:

J. Pataky:

- Program visitors will need additional guidance on how to properly frame their feedback

3069.1.10 CIS prototype to link GAs and AUs

R. Dony will provide an update on the P&P's initiative to develop a CIS prototype to "link" GAs to AUs. AB members interested in continuing this work with P. Klink and W. MacQuarrie are encouraged to indicate their interest. P.Klink to suggest a title for this project.

3070.2 International Relations – Washington Accord

3070.2.1 International Engineering Alliance Meeting

L. Benedicenti advised Board members that the 2019 International Engineering Alliance Meeting will be held in Hong Kong from June 10 to 14.

This meeting will be discussing applications of various agencies or countries for Washington Accord membership status. The following discussions will result in guidance to the Engineers Canada delegation attending and voting at the Washington Accord meeting.

3070.2.2 Application for provisional status – Institution of Engineers Indonesia (IABEE)

The report of the Washington Review Team on the Accreditation system of the *Institution of Engineers Indonesia (IABEE)* was reviewed by S. Barrington.

Her observations include the following:

- IABEE's main objective is to promote continuous quality improvement of Higher Education Engineering Programs in Indonesia.
- IABEE has an outcome-based education system meeting international standards.
- A steering committee was established in 2013 as requested by the Ministry of Education and Culture of Indonesia.
- Their education system is very similar to North American system.
- IABEE has achieved three accreditation cycles starting in 2016, and as of today, 28 programs have been evaluated, where 10 were accredited, 7 accredited with interim evaluation without on-site visit, 10 accredited with interim evaluation with on-site visit, and 1 not accredited.

The following motion was carried unanimously:

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the application for provisional membership of Indonesian Accreditation Board for Engineering Education (IABEE)”.

3070.2.3 Application for provisional membership – Council for the Regulation of Engineering in Nigeria (COREN)

The report of the Washington Review Team on the Accreditation system of the *Council for the Regulation of Engineering in Nigeria (COREN)* was reviewed by R. Subramanian and J. Pataky.

Their observations were:

- All the elements of the WA admission criteria for Provisional Membership appear to be met from a process perspective. There is insufficient evidence that the quality/quantity of the accreditation system elements would meet WA standards and some concerns were expressed by PEC that COREN does not have the capacity (resources and not capability) to meet the requirements of being able to accredit all the programs described. However, these concerns are not considerations for determination of WA Provisional Membership Status.

The following motion was carried unanimously:

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the application for provisional membership of the Council for the Regulation of Engineering in Nigeria (COREN)”.

3070.2.4 Application for provisional membership for the Thailand Accreditation Board of Engineering Education (TABEE)

The report of the Washington Review Team on the Accreditation system of the *Thailand Accreditation Board of Engineering Education (TABEE)* was reviewed by P. Klink and P. Cyrus.

Their observations included the following:

- TABEE is a subcommittee of the Council of Engineers of Thailand (COE).
- They have a strong case for provisional membership in the WA. The following issues should be resolved before provisional status is upgraded:
 - **Independence of COE:** 25% of members of the COE board are appointed by the Ministry of the Interior. These individuals appoint members of the TABEE. From the documents, the responsibilities of these appointees to the Ministry are unclear.
 - **Qualifications for TABEE:** Qualifications for TABEE are not detailed. Current membership seems to be exclusively academics.
 - **Conflicts of Interest:** Discussion by an observer of the decision meeting alluded to possible participation by persons with a conflict of interest in program discussions.

- **Quorum for Decisions on Programs:** An observer raised concerns about lack of participation by the members.
- **Curriculum Input Requirements:** An observer noted no specific requirements were detailed in terms of volume of math, basic sciences, and professional components.
- **Examination of Program Leadership:** An observer noted that current criteria do not examine leadership of the program.
- **Published List of Accredited Programs:** COE is redesigning its website to publish a list of accredited programs as well as other accreditation documents.
- **Lack of Qualified Engineers Teaching:** An observer noted a possible lack of qualified engineers teaching in programs (this issue is covered by the criteria).

The following motion was carried with one opposition (T. Zrymiak):

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the application for provisional membership of the Thailand Accreditation Board of Engineering Education (TABEE)”.

3070.2.5 Application for provisional membership for the Myanmar Engineering Council (MEC)

The report of the Washington Review Team on the Accreditation system of the *Myanmar Engineering Council (MEC)* was reviewed by D. Candido and J. Pieper.

Their observations included the following:

- The accrediting agency has the following characteristics:
 - is non-governmental
 - is legally incorporated in its home jurisdiction
 - is the uncontested accreditation agency of the engineering community in the jurisdiction
 - is a statutory or professionally recognised authority to accredit programs satisfying academic requirement for admission to practising status in a jurisdiction
 - accredits programmes at institutions that have legal authority to confer higher education degrees qualifications
 - has policies to set, approve, evaluate and execute accreditation criteria and procedures
 - is independent of the educational providers delivering accredited programmes in its jurisdiction
 - has autonomy to make accreditation decisions independent of stakeholder influence

The following motion was carried with one opposition (E. Cheung) and two abstentions (P. Klink and A.M. Laroche):

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the application for provisional membership of the Myanmar Engineering Council (MEC)”.

3070.2.6 Application for signatory membership for the Consejo de Acreditación de la Enseñanza de la Ingeniería - Mexico (CACEI)

The report of the Washington Review Team on the Accreditation system of the *Consejo de Acreditación de la Enseñanza de la Ingeniería (CACEI)* was reviewed by E. Cheung.

The following motion was carried unanimously:

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the deferral of the application for signatory membership of Consejo de Acreditación de la Enseñanza de la Ingeniería (CACEI)”.

3070.2.7 Monitoring review for the Institute of Engineering Education Taiwan (IEET)

The report of the Washington Review Team on the Accreditation system of the *Institute of Engineering Education Taiwan (IEET)* was reviewed by P. Lafleur.

His observations included the following:

- The Joint Washington Accord/Sydney Accord Monitoring Review Team that visited IEET recommends that:
 - “IEET be accepted by the other signatories, for a period of six years, as leading to outcomes substantially equivalent to those recognized by the Washington Accord and Sydney Accord”
- The reasons for making the above recommendation are based primarily on the following observations:
 - The standard of the graduates of accredited programs are substantially equivalent to graduates of other Accord signatories;
 - The outcomes-based accreditation system, criteria, rules, and procedures are well documented and sustainable, and the accreditation activities follow the documented process; and,
 - The program evaluators are well-qualified to carry out accreditation

The following motion was carried unanimously:

MOTION:

"That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the acceptance of the Institute of Engineering Education Taiwan (IEET) for a period of 6 years, as leading to outcomes substantially equivalent to those recognized by the Accord "

3070.2.8 Review of the visiting team for the Accreditation Board of Engineering Education of Korea (ABEEK)

The report of the Washington Review Team on the Accreditation system of the *Accreditation Board of Engineering Education of Korea (ABEEK)* was reviewed A.M. Laroche and R. Gosine.

Their observations included the following:

- Overall, they found the review team report to be very positive in regard to the ABEEK accreditation process. The Review Team's description of the process followed by evaluation teams (pre-visit and during the visit) and the subsequent post-visit processes (Consistency Checking, Editor, Accreditation Council) suggested the processes were similar, albeit with some differences, to those of the CEAB. One difference of particular note is that the evaluation team (similar to what we call visiting teams) actually makes a recommendation to a Decision Committee. It was also noted that prospective members of evaluation teams go through a training course before being appointed to a team.
- The review team report was quite positive on the process of accreditation in Korea. Even though there are some small differences in the process, ABEEK with its accreditation processes and criteria meet the expectations of the Washington Accord.

The following motion was carried unanimously:

MOTION:

"That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the acceptance of the Accreditation Board for Engineering Education of Korea (ABEEK) for a period of 6 years, as leading to outcomes substantially equivalent to those recognized by the Accord "

3070.2.9 Update on the mentorship of the *Collegio Federado de Ingenieros y de Arquitectos de Costa Rica (CFIA)*

L. Villeneuve provided an update on CFIA's current provisional status who are working towards signatory status.

CFIA is a provisional member of the Washington Accord. Engineers Canada is an official mentor to *CFIA*. This organization has provided written notice of intent to apply for signatory status in June 2019.

The update included in the meeting materials indicated that plans to apply for signatory status have been delayed to June 2020.

3070.2.10 Monitoring review of the Engineering Council UK (ECUK)

The report of the Washington Review Team on the Accreditation system of the *Engineering Council UK (ECUK)* was reviewed R. Dony and W. MacQuarrie.

After receiving a monitoring review in 2017, ECUK last year was given a decision that they were to provide a progress report on issues. The report from the monitoring review is included in the meeting materials. The Washington Accord secretariat does not normally produce the “decision letter” in the same manner as we do in Canadian accreditations.

The following motion was carried unanimously:

MOTION:

“That the Canadian Engineering Accreditation Board communicates to the Engineers Canada delegation that they agree with the Washington Accord monitoring team’s evaluation of the report from the Engineers Council UK. CEAB agrees that the report is not fully compliant in that the report does not satisfy CEAB that adequate steps are being taken to address the issues of the monitoring report.”

3070.2.11 Continuous monitoring review of Engineering New Zealand (ENZ)

The report of the Washington Review Team on the Engineering Zealand (ENZ) was reviewed L. Benedicenti and W. MacQuarrie.

Continuous reviews are normally used in jurisdictions that have fewer programs and thus cannot accommodate a regular (periodic) review. In the case of this review, the team recommends continuation of signatory status for six years. The question to be discussed by CEAB is whether members support this recommendation, and provide the Engineers Canada delegation with advice on how to vote at the meeting.

The following motion was carried unanimously:

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the recommendation of continuation of signatory status for 6 years for Engineering New Zealand (ENZ)”.

3070.2.12 Mentoring report on the Board of Accreditation for Engineering and Technical Education – Bangladesh (BAETE)

The report of the Washington Review Team on the Board of Accreditation for Engineering and Technical Education (BAETE) was reviewed L. Villeneuve.

BAETE has provisional member status with the Washington Accord since 2003 but has had difficulty in progressing towards signatory status. Mentors have been assigned to assist. Rules adopted in 2016 stated that normally a jurisdiction must progress within approximately four to six years. This rule came into effect after this jurisdiction was awarded provisional status, but the signatories still wish to see progress from Bangladesh in reaching signatory status. The report indicates that reasonable plans to achieve this are in place.

The following motion was carried unanimously:

MOTION:

“That the Canadian Engineering Accreditation Board recommends that the Engineers Canada delegation to the Washington Accord support the continuation of provisional member status of the Institution of Engineers Bangladesh”.

3070.2.13 Mutual recognition of the Association for Engineering Education of Russia (AEER)

The report of the Washington Review Team on the Association for Engineering Education of Russia (AEER) was reviewed by W. MacQuarrie and R. Dony.

As part of the last Washington Accord monitoring visit, AEER requested that their 4-year bachelor’s degree be reviewed as they wished to have it be their Washington Accord degree (instead of the 5 year “specialist diploma”). The five-year degree is no longer the entry level qualifications for the profession in Russia. The Executive Committee of the Washington Accord allowed that those programs be part of the review. At the June 2018 meeting, signatories felt they had received insufficient information to assess the difference between the 5-year degree and the 4-year degree. Additional information was provided by AEER in the fall of 2018.

Prior to the June Accreditation Board meeting, the secretariat was asked to forward the following question to AEER: *While there are plans to meet the sixteen years of formation standard by 2024, our reviewers are asking what extra effort (if any) is being made to ensure current students (who complete 11 years prior to beginning bachelor studies) are prepared to successfully complete the new 4 year bachelor?*

An answer to that question was not received in time for the June CEAB meeting. After discussion, it was resolved,

MOTION:

“That the Canadian Engineering Accreditation Board recommends the Engineers Canada delegation to the Washington Accord not support AEER’s request. It will be in the discretion of the delegation to decide if the answer provided is convincing.”

3070.2.13 Washington Accord monitoring of Engineers Canada

L. Villeneuve provided an update regarding the activities related to the Washington Accord’s monitoring of Engineers Canada. Accreditation Board members are to contact the Secretariat if interested in participating on the visits.

3070.3 Accreditation Board for Engineering and Technology (ABET) Symposium

L. Benedicenti provided an update on his attendance as an observer at the April 10 to 13, 2019 ABET symposium in Dallas Texas. His observations included the following:

- The symposium offered a unique source of information exchange.
- There were many workshops on "how to conduct an accreditation visit" for ABET.
There was a change to the criteria that reduced the number of graduate attributes from 11 to 7. This change took many years – a good example of the change management process that is needed for this type of substantive adjustment in an accreditation program.
- Cyber security was the theme of the workshop this year.
- Engineers Canada held a workshop called " The Discussion Den" led by A. Bergeron, past President of Engineers Canada.

He noted that he and other current members of the Accreditation Board were PEV (program visitors for ABET) and should an invitation be sent, he would encourage other members of the Accreditation Board to participate to learn how accreditation is done in other jurisdictions.

Comment:

D. Lynch:

- M. Wolfe was at the Engineers Canada Board meeting in Quebec City and in the area of diversity, she stated that now ABET is now moving forward with including questions about diversity in their questionnaires.

3071 NEW AND FUTURE BUSINESS

3071.1 September 2019 workshop

L. Benedicenti asked Board members for suggestions of agenda topics for the September 2019 workshop. The workshop theme this year will be on "How to Chair a Visit".

3071.2 Comments from observers and representatives of the Engineers Canada Board

L. Benedicenti invited the meeting observers to provide feedback on the meeting. Observers' comments were as follows:

W. Vasquez:

- Issue of accreditation units is important for students. While the education must produce qualified persons, the education has to be suitable.

D. Lynch:

- On behalf of Engineers Canada and regulators, thank you. The work of the Accreditation Board is invaluable and is very detailed work. Regulators have highest regard for this work. Accreditation work is the highest priority.

M.J. Nollet:

- Really appreciate being invited to the meeting. Seeing the work done here will mobilize professors who often see accreditation as extra work.

3072 FUTURE MEETINGS

3072.1 Meeting schedule for 2019/2020

L. Benedicenti presented the proposed dates and locations for future Accreditation Board meetings. No concerns were raised.

3073 SUMMARY OF ACTION ITEMS

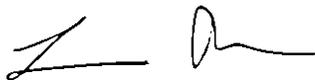
A list of meeting action items will be distributed to Board members after the meeting for review and comments.

3074 MEETING EVALUATION BY ACCREDITATION BOARD MEMBERS

Members were reminded to submit their meeting evaluation forms before leaving the meeting. Paper copies were distributed during the meeting and the link to the electronic survey was included on the agenda item template.

3075 ADJOURNMENT

The 164th meeting of the Canadian Engineering Accreditation Board adjourned at 18:00 on Sunday, June 2, 2019.



Luigi Benedicenti, FEC, P.Eng.
Chair



Mya Warken
Secretary

Agenda item / Minute number	Action description	Supporting information	Responsible	Status
3.3 / 3064.3 Western GACIP meeting	Ask GACIP meeting organizers to send invitation to all meeting to CEAB members		L. Villeneuve	Done – CEAB Secretariat will ensure all future notices of meeting get distributed to AB members
4.4 / 3065.4 AB's observation of the QB meeting	Include QB's engineering design suggestions to the Engineering Design Committee's next meeting's agenda.	QB's new Aerospace and Aeronautical Engineering Syllabus	M. Warken	Done – CEQB will be consulted on the recommendations at their next meeting
4.8 / 3065.8 Nominations Task Force policy changes	Prepare a Vice-chair appointment election process email for distribution to the Accreditation Board		L. Villeneuve	Done – Email sent June 12, BF July 25
4.9 / 3065.9 Accountability in Accreditation Committee	Upload committee Terms of Reference to the collaboration space (OneHub)		J. Lamarche	Done
5.2 / 3066.2 Member assignments for the September 2019 AB meeting	Review the list of programs presented under this item, in particular the University of Western Ontario's Mechatronic Systems Engineering program	This was due to an administrative error in the secretariat's historical records; program was visited in the 2018/2019 cycle	J. Lamarche	Done – removed the program from list
5.3 / 3066.3 Programs under development	Add word "Engineering" under the Environmental program at the University of British Columbia heading and amended list of programs under development before the September Accreditation Board meeting		A. Olivas & A. Adnot	Done
8.1.1 / 3069.1.1 P&P Committee meeting	P&P to develop an implementation plan to be brought back to CEAB		P & P	Done
8.1.2 / 3069.1.2 Update from the AU Task Force	P&P to incorporate the recommendations of the AU Task Force in their annual workplan.		P & P	Done
8.1.3 / 3069.1.3 General Visitor role description	P&P to incorporate the consultation on the general visitor report and the future of the role in the accreditation process in their annual workplan.		P & P	Done
8.1.4 / 3069.1.4 CEAB complaints policy	Include the approved CEAB Complaints Policy in the 2019 Accreditation Criteria and Procedures.		J. Lamarche	To be actioned after Sept. AB meeting
8.1.5 / 3069.1.5 Criteria 3.4 and Appendix 3	Submit the proposed criteria change (3.4.4.1 and 3.4.4.4) to the Engineers Canada Board approval. Incorporate the Interpretive Statement changes in the 2019 Accreditation Criteria and Procedures		L. Villeneuve & J. Lamarche	Done